

Work Order ID 135537

135537

Page 1

Wednesday, August 12, 2015 4:32:50 PM

Item ID: 646.3715 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Strut Doubler

Start Date: 8/12/15 Start Qty: 6.00 *6* Cust Item ID:

Required Date: 8/12/15 Req'd Qty: 6.00 *6* Customer:

Reference:

Approvals: Process Plan: WLS Date: AUG 17 2015 Tooling: _____ Date: _____ Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
646.3700	A								
110		0.00							
110									
Waterjet	Memo	0.00							
FLOW CNC Waterjet	1-Cut as per Dwg								
	Dwg Rev: <u>A</u>								
	Prog Rev: <u>A</u>								
	2-Deburr if necessary								
120	QC2- Inspect parts off machine FAI/FAIB	0.00							
120									
QC	Memo	0.00							
Quality Control									

⑥

08/15/2015

⑥

08/15/2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC5- Inspect part completeness to step on W/O	0.00							
160									DAS 38 9-89
QC	Memo	0.00							SEP 30 2015
Quality Control									
190	Identify as per dwg & Stock Location: <u>cc k 105</u>	0.00							
190									DAS 27 9-89
Packaging	Memo	0.00							SEP 30 2015
Packaging	***IDENTIFY AS PER APICAL MPP-120 BY STAMPING THE P# AND REV***								
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	0.01							OCT 01 2015
Quality Control									

MC5 OCT 01 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Picklist Print

Wednesday, August 12, 2015 4:32:50 PM

Page 1

Work Order ID: 135537

135537

Parent Item: 646.3715

646 3715

Parent Item Name: Strut Doubler

Start Date: 8/12/15

Required Date: 8/12/15

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 12.10.22 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.040		Purchased		No		110	sf	252.7805	0.0434	0.274105			

M6061T6S 040

6061-T6 .040 Sheet

08/15/15/28

Location

Loc Qty

Loc Code

MAT021

252.7805

m130312

5.1135

m131352

105.467

m132037

142.2

3

DQA: _____ Date: _____



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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																								
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																								
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Past Expiry Date ☐	Manufacturing Process ☐																																																																												
Misidentified ☐	Past Due ☐																																																																												

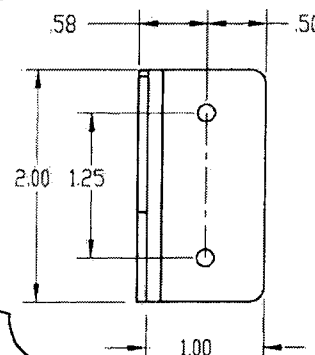
APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03702				SHEET 1 OF 2	
	DWG NO. 646.3700	REV: A	PREPARED BY B. PETERS	DATE: 11/15/12	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: SHEETMETAL					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: NEXT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED ALTERNATE MATERIAL AND REVISED REFERENCE DIMENSIONS				EOR: D-12-010	

SHEET 1, ZONE A2 IS:

IS

△ PRIMARY MATERIAL: ALUMINUM 6061-T6 PER AMS-QQ-A-250/11
ALTERNATE MATERIAL: SS 17-4 PH PER AMS 5604

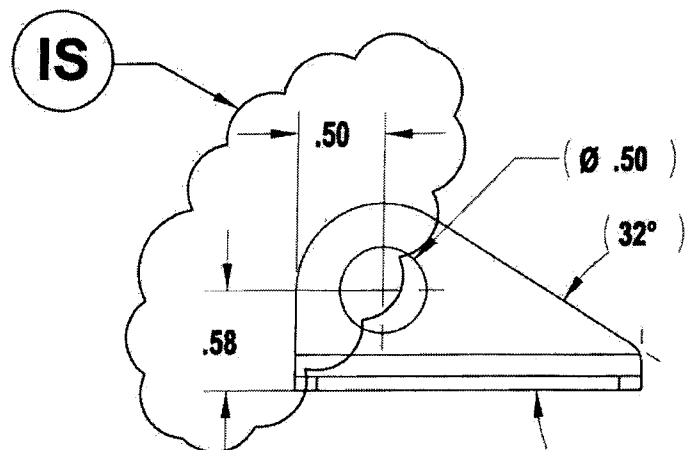
IS



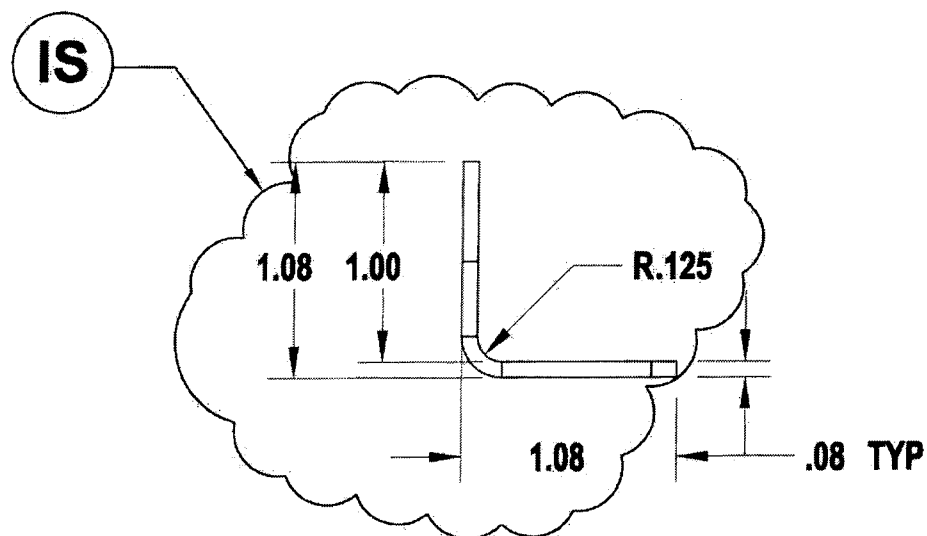
SHEET 7, ZONE B1 IS:

SHOP COPY
RETURN TO
ENGINEERING
CONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
135537 MLS
150817

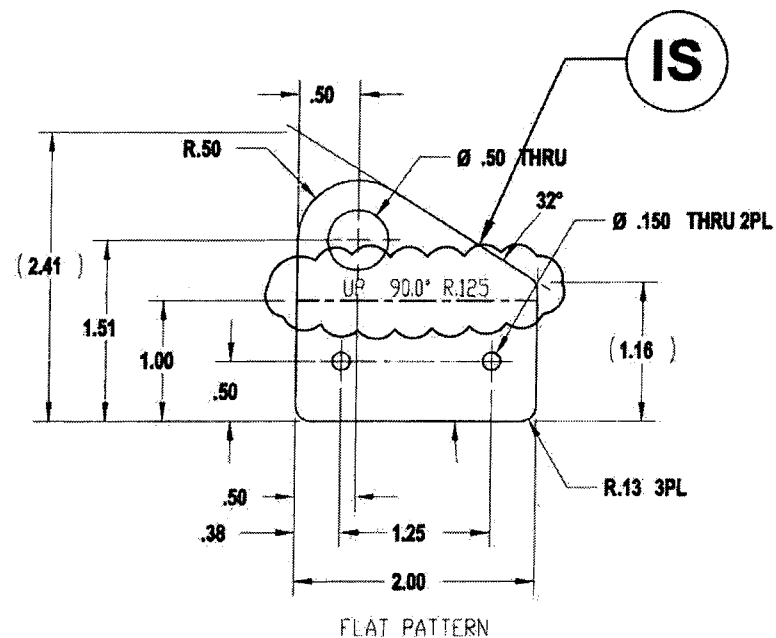
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				☐ RFMS ☐ MDL ☐ INSTALL INSTRUCC ☐ ICA ☐ BOM	CHANGE CATEGORY ☐ MAJOR ☒ MINOR	DER REVIEW REQUIRED ☐ YES ☒ NO



SHEET 7, ZONE C4 IS:



SHEET 7, ZONE D1 IS:



SHEET 7, ZONE B7 IS:

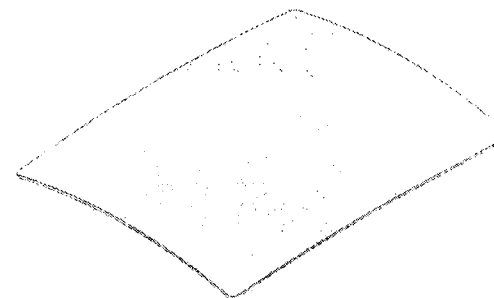
F/N	TC	PART NUMBER	QTY	DESCRIPTION	MATERIAL/SPECIFICATION
-----	----	-------------	-----	-------------	------------------------

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REV.	DESCRIPTION	DATE	APPROVED
A	UNINCORPORATED ECN 0218	01/03/00	REV 20

NOTES:

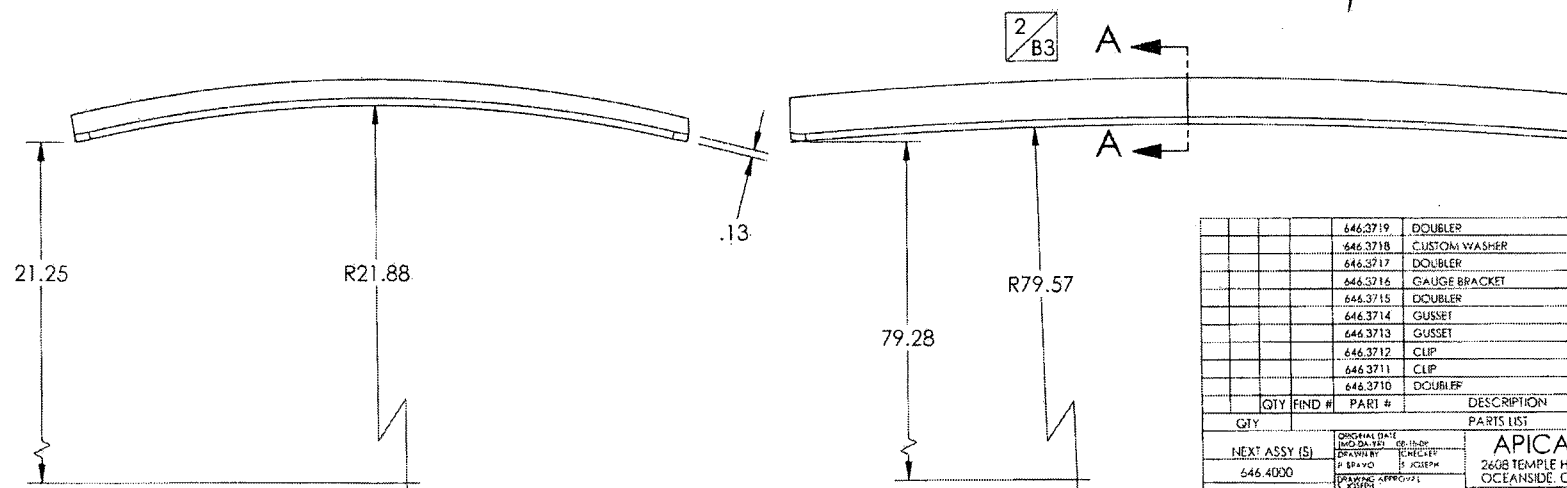
- 1 MATERIAL: ALUMINUM 6061-T6 PER AMS-QQ-A-250/11
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; CARDINAL 4860-50 PRETREATMENT PRIMER PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 MATERIAL: 17-4 PH AMS 5604, CONDITION H900
- 4 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N
- 5 DEBURR AND BREAK ALL SHARP EDGES
- 6 IDENTIFY IAW MPP-120



646.3710

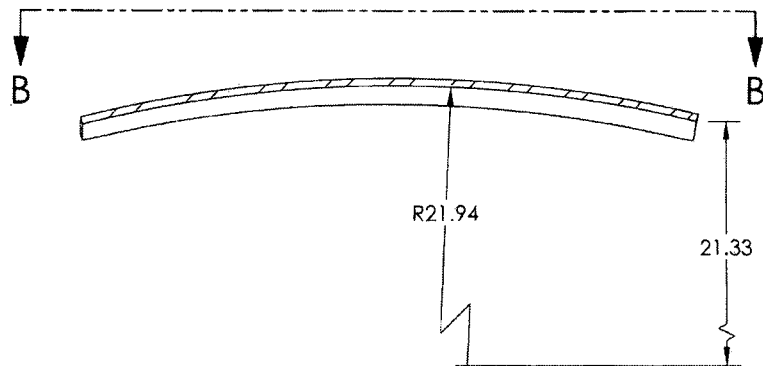
UNINCORPORATED ECN(s)

03702



QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.
		646.3719	DOUBLER	AL	AL
		646.3718	CUSTOM WASHER	AL	AL
		646.3717	DOUBLER	AL	AL
		646.3716	GAUGE BRACKET	AL	AL
		646.3715	DOUBLER	AL	AL
		646.3714	GUSSET	AL	AL
		646.3713	GUSSET	AL	AL
		646.3712	CLIP	AL	AL
		646.3711	CLIP	AL	AL
		646.3710	DOUBLER	AL	AL
PARTS LIST			APICAL INDUSTRIES		
NEXT ASSY (S)			2608 TEMPLE HEIGHTS DR.		
646.4000			OCEANSIDE, CA 92056-3512 (760)724-5300		
ORIGINAL DATE			SHEETMETAL		
MOD DA TBY			REV		
DRAWN BY			A		
P. BY			B		
CHECKED BY			C		
DESIGNED BY			D		
UNLESS OTHERWISE SPECIFIED			SCALE NONE		
DIMENSIONS ARE IN INCHES			SHEET 1 OF 9		
TOLERANCES ARE					
2 PLACE DECIMAL ± .01					
3 PLACE DECIMAL ± .005					
ANGLES ± .5°					

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SECTION A-A



21.33

R21.94

R.13 4PL

R395.138

13.51

10.49

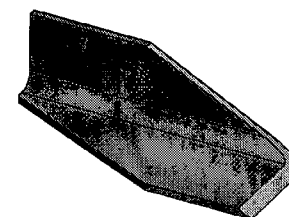
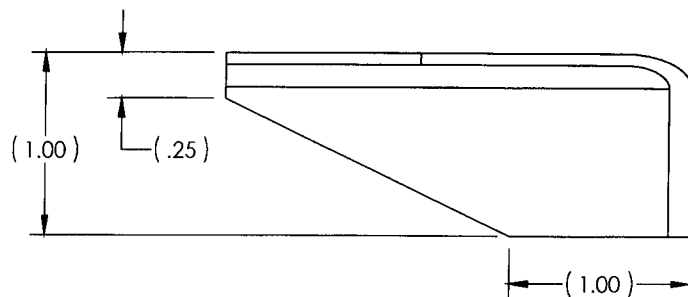
10.54

SECTION B-B

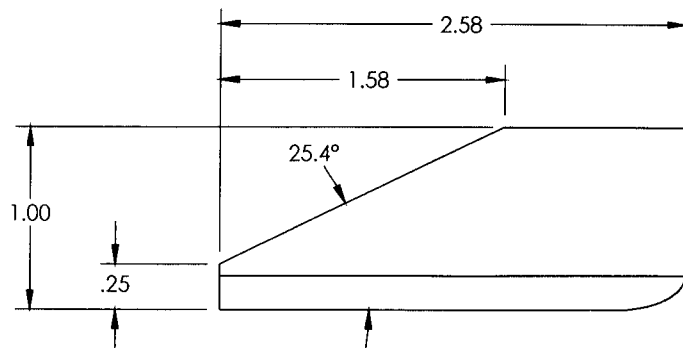
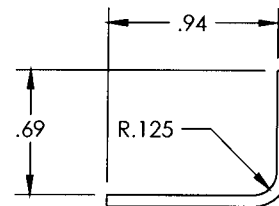
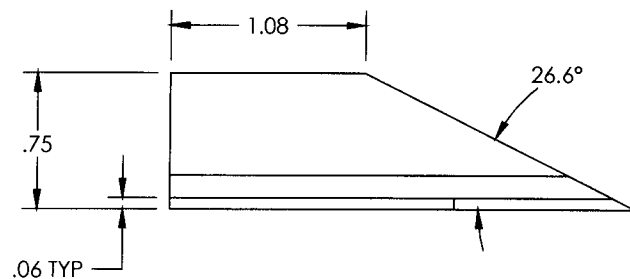
APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		SHEETMETAL	
ORIGINAL DATE: 08-18-06 DRAWN BY: J. JOSEPH CHECKED BY: J. JOSEPH DESIGNED BY: J. JOSEPH APPROVED BY: J. JOSEPH CONTRACT NO.	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES 1:5	SHEET CODE: 07M26 DWG NO: 646.3700 SCALE: NONE	REV: A SHEET 2 OF 9

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



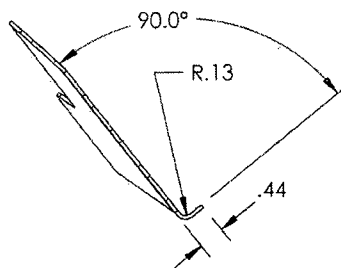
646.3711 SHOWN
646.3712 OPPOSITE



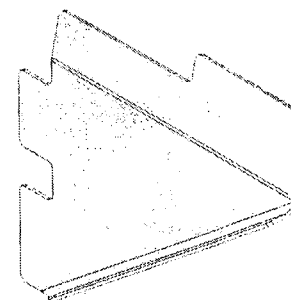
NEXT ASSY (\$)		ORIGINAL DATE 08-18-08	APICAL INDUSTRIES	
DESIGNED BY P. BRAVO	CHECKED BY S. JOSEPH	DRAWING APPROVAL S. JOSEPH	2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CONTRACT NO.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE 2 PLACE DECIMALS ± .01 ANGLES ± .5°	SHEETMETAL	REV. A
SCALE: NONE		SHEET B	CAGE CODE 07M126	DWG. NO. 646.3700
		SHEET 3 OF 9		

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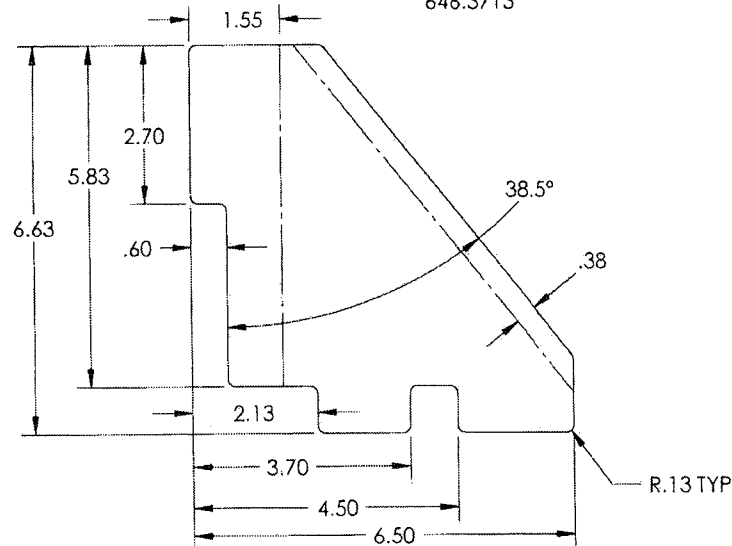
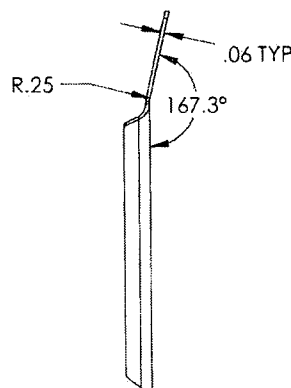
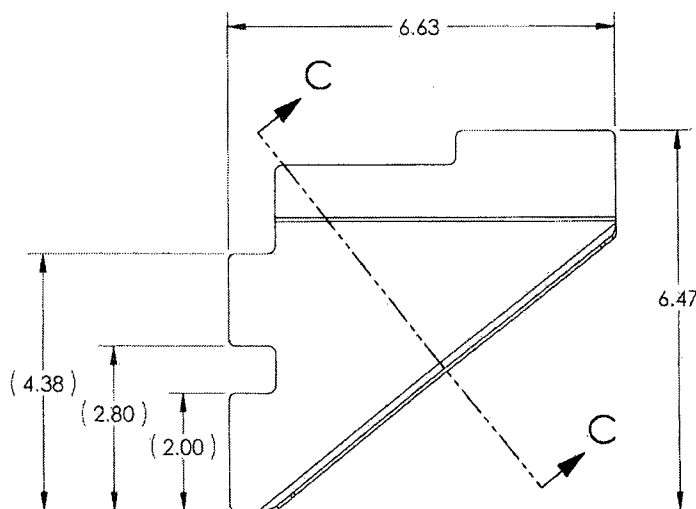
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



SECTION C-C



646.3713

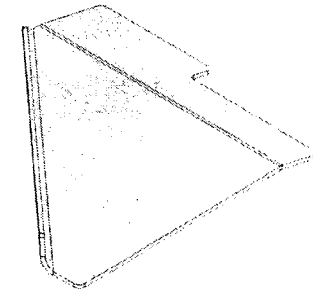
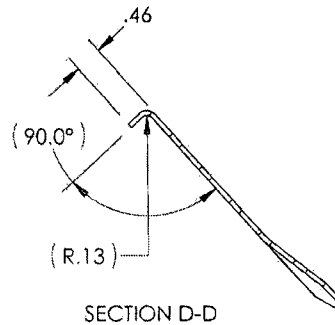
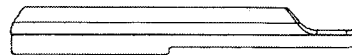


FLAT PATTERN

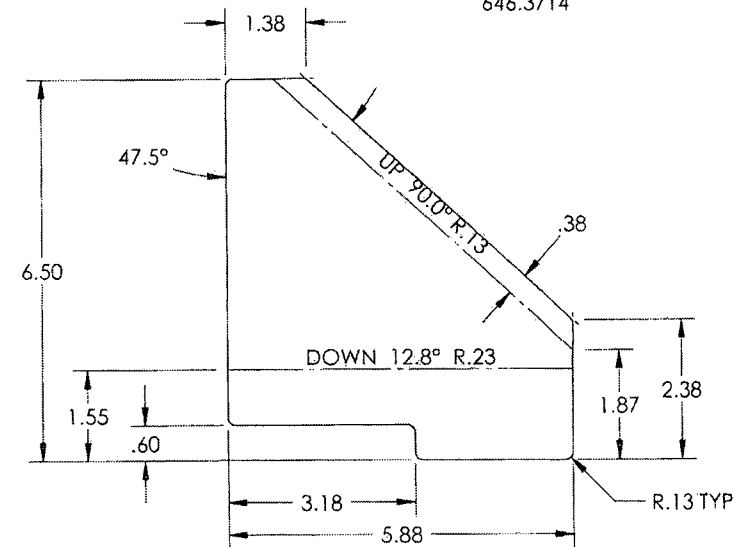
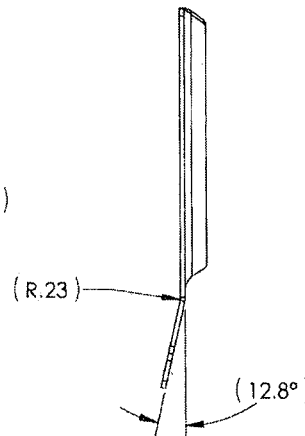
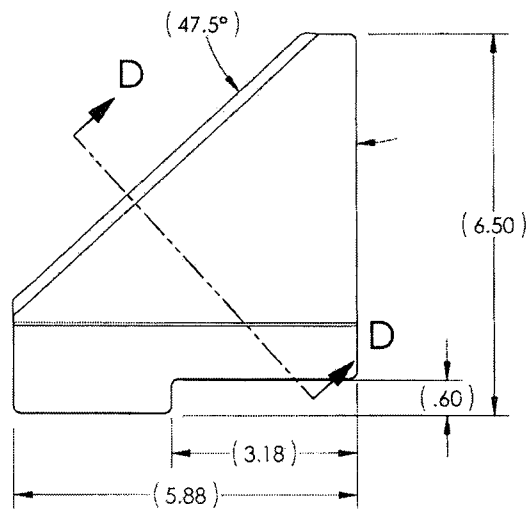
NEXT ASSY (S)	ORIGINAL DATE	08-19-02	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
	DESIGNED BY	ENGINEER		
	P. DEALVO	S. SCHERER		
	APPROVED BY	DATE		
			SHEETMETAL	
	UNLESS OTHERWISE SPECIFIED		SEE CYCLE CODE	ENV. NO.
	DIMENSIONS ARE IN INCHES		B 07M26	646.3700
	TYPICAL DIMENSIONS ARE		SCALE: 1"=1.00"	SHEET 4 OF 9
	ANGLE: 1°			

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



646.3714

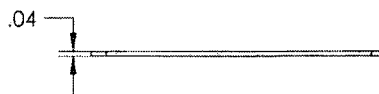
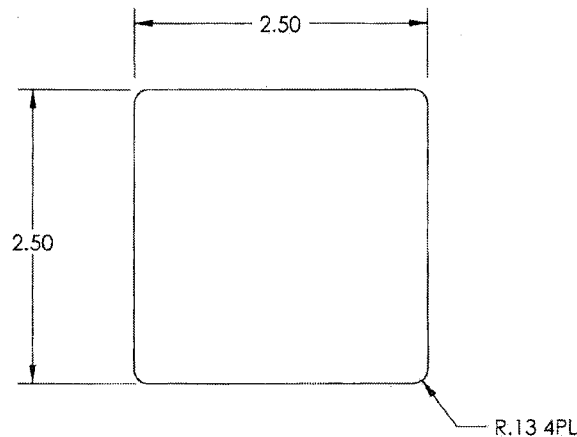


FLAT PATTERN

ORIGINAL DATE (7/20/04-19) CS 18-03	APICAL INDUSTRIES		
DRAWN BY: J. K. HENRY	2608 TEMPLE HEIGHTS DR		
DATE: 8-18-01	OCEANSIDE, CA 92056-3512 (760) 724-5300		
DESIGNED BY: J. K. HENRY	SHEETMETAL		
APPROVED BY: J. K. HENRY			
CONTRACT NO:			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°	SHEET 5 OF 9		

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REVISION			
REV	DESCRIPTION	DATE	APPROVED

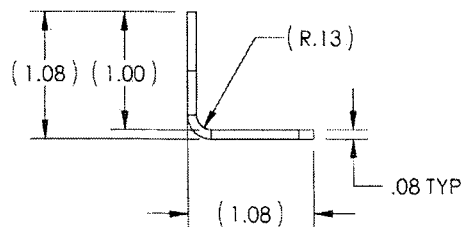
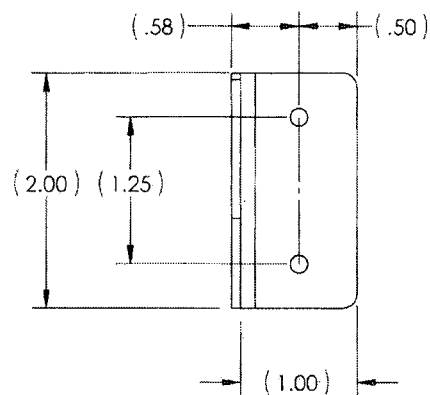


646.3715

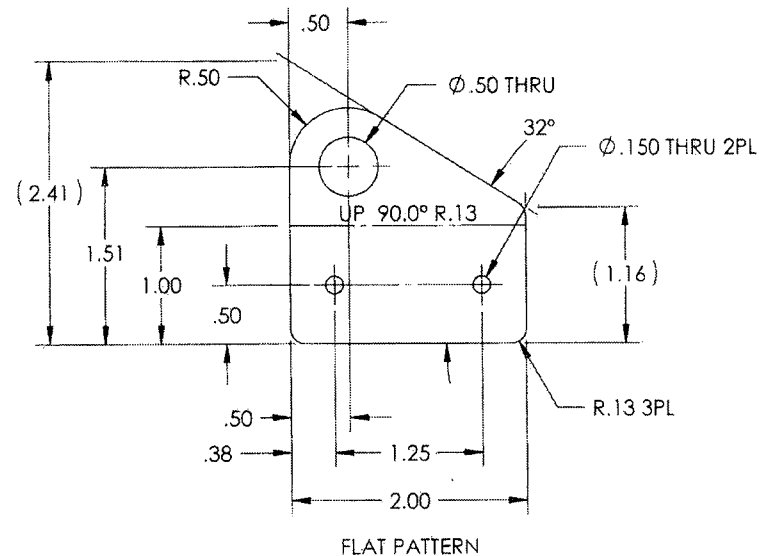
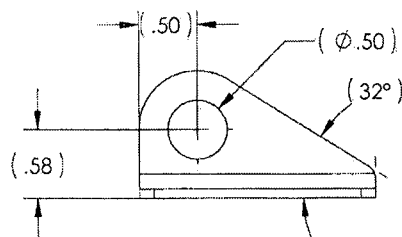
NEXT ASSY (S)		ORIGINAL DATE (DD-MMM-YY)	08-18-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
DRAWN BY P. BRAVO		DESIGNED BY J. JOSEPH			
DRAWING APPROVAL J. JOSEPH		DATE 08-18-08		SHEETMETAL	
COUNTERPART NO.					
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.005 ANGLES ±.1°		DWG. NO. B 071616	REV. A
		SCALE: NONE		SHEET 8 OF 9	

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



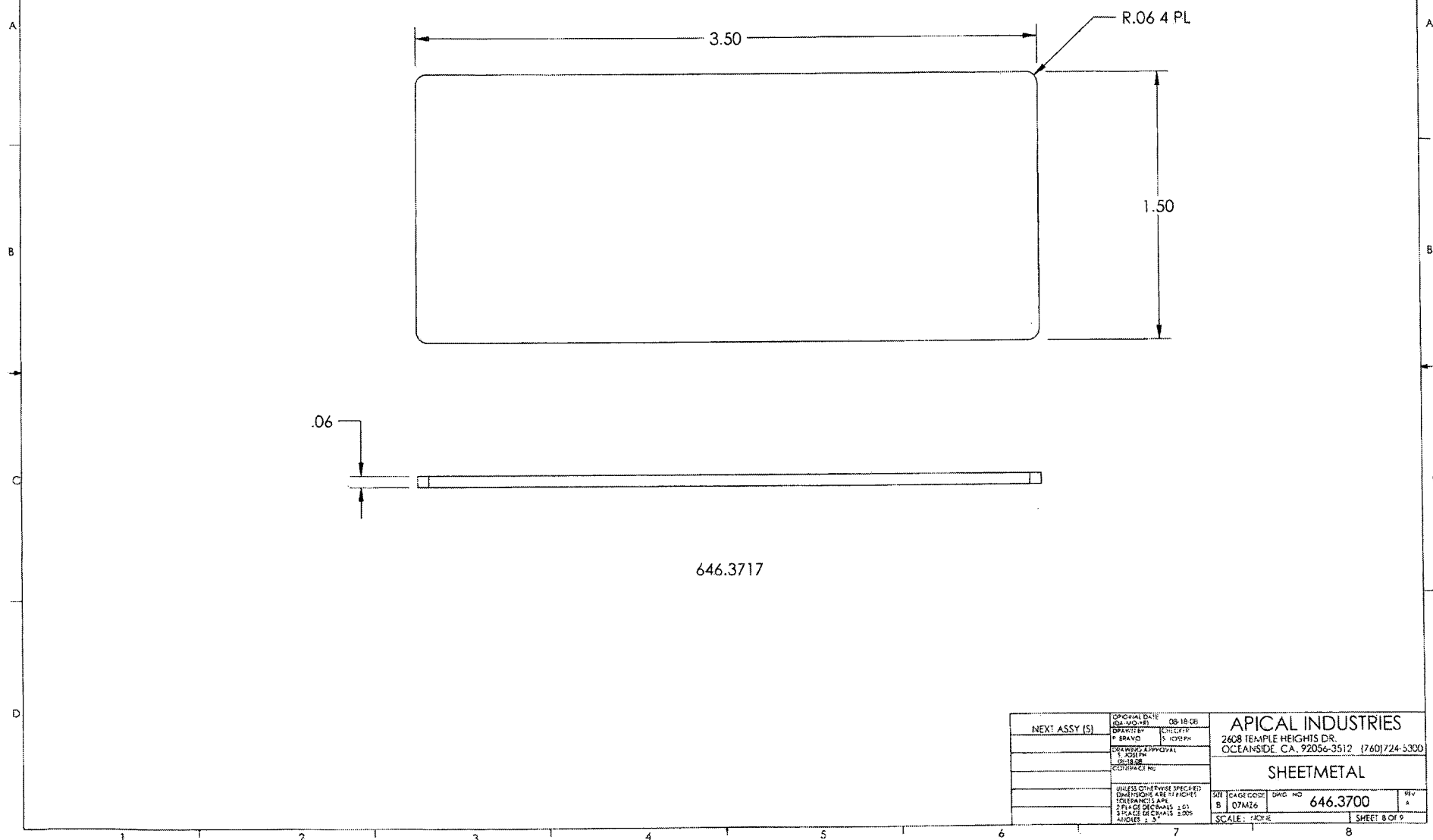
646.3716



FLAT PATTERN

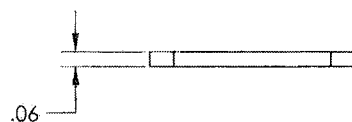
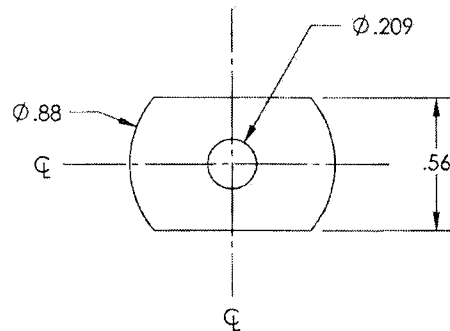
NEXT ASSY [S]	ORIGINAL DATE	08-15-08	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300 SHEETMETAL	
	DRAWN BY	JOSEPH		
	DESIGNED BY	JOSEPH		
	DATE OF APPROVAL	08-15-08		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES FRACTIONS ARE 1/16 DECIMALS ARE .001 ANGLES ARE 1°	DATE	08-15-08	DATE	08-15-08
	REV	07M16	REV	07M16
	SCALE	1:1	SCALE	1:1
	SHEET	2 OF 2	SHEET	2 OF 2

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED

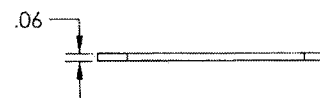
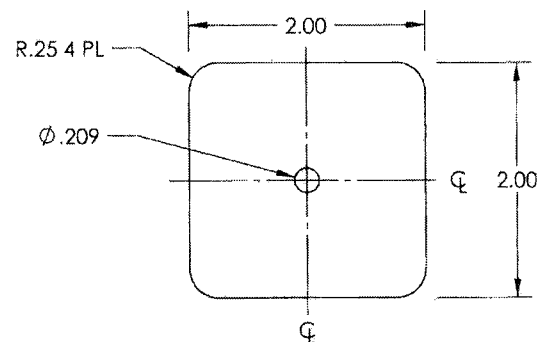


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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED



646.3718



646.3719

NEXT ASSY. (S)	ORIGINAL DATE	06-18-09	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
	DESIGNED BY	C. HESTER		
	DRAWN BY	P. BRAVO		
	CHECKED BY	S. JOSEPH		
	DRAWING APPROVAL		SHEETMETAL	
	DATE	06-18-09		
	CONSTRUCTION			
	UNLESS OTHERWISE SPECIFIED		DATE	06/18/09
	DIMENSIONS ARE IN INCHES		CAGE CODE	07M16
	TOLERANCES ARE:		DWG. NO.	646.3700
	3 PLACE DECIMAL: ±.01		SCALE:	NONE
3 PLACE DECIMAL: ±.01		SHEET 1 OF 1		PLS. 1



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 63904

Date: 10-Sep-15

To :

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity	Description		
18 ea	Part: 646.3715 STRUT DOUBLER HARD ANODIZE BLACK AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150670 PO: PO29687	Rev: A	8015-09-10- Line: 2215/09/30 x 6 pcs.
16 ea	Part: 646.3718 CUSTOM WASHER HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PAINT IS SUPPLIED BY CUSTOMER Job: 20150671 PO: PO29687	Rev: A	Line:
20 ea	Part: 650.9201 EYELET BRACKET HARD ANODIZE BLACK MIL-A-8625 TYPE III CLASS 2 PRIME MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY CUSTOMER Job: 20150672 PO: PO29687	Rev: A	Line:
6 ea	Part: 646.3110 CHANNEL HARD ANODIZE AS PER MIL-A-8625 TY III, CLASS 2 PRIME AS PER MIL-P-23377J TYPE I CLASS N PRIMER IS SUPPLY BY THE CUSTOMER Job: 20150673 PO: PO29687	Rev:	Line:
2	Part: 647.9610	Rev:	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO29687**

Purchase Order Date 9/3/2015

PO Print Date 9/8/2015

Page Number 2 of 3

Order From :

VC-ATG001

A.T.G. INDUSTRIES INC.
731 INDUSTRIELLE ROAD
ROCKLAND, ON K4K 1T2
CANADA

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

613-446-4544

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Ship To Contact

Ship To Phone

Ship Via:

VENDOR'S TRUCK

Ship Acct:

Line Total: \$132.00

4	134447	646.3110 CHANNEL REV. N/C	9/9/2015	6.00	✓	\$10.65	\$63.90
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Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$63.90

5	131242	647.9610 WIPER DEFLECTOR REV. N/C	9/9/2015	2.00	✓	\$16.05	\$32.10
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Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Line Total: \$32.10

6	135537	646.3715 STRUT DOUBLER REV. A	9/9/2015	6.00	✓	\$6.25	\$37.50
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Yes

9/9/2015

FINISH: HARD BLACK ANODIZE AS PER IAW MIL-A-8625 TYPE III, CLASS 2 / PRIME AS PER IAW MIL-P-23377J TYPE 1 CLASS N

Note:

9/8/2015